

Application No. 10/645,400
Response to Final Office Action of March 28, 2008

Amendments to the Drawings:

The attached sheets of drawings includes changes to Figs. 2-4. These sheets, which include Figs. 2-4 replaces the original sheets including Figs. 2-4. Figs. 2-4 have been labeled “PRIOR ART”.

Attachment:

Replacement sheets

REMARKS

Claims 1, 4, 5, 7-9, 12-15 and 17-28 are pending in the application. Claims 1, 4, 8, 9, and 12, 9 have been amended. New claims 25-28 have been added. Support for the amendments and new claims is found in at least paragraphs from page 33, line 11 to page 35 line 8. Applicant submits that no new matter has been added to the application by the Amendment.

Note that the subject matter of Hiroaki has been interpreted with the assistance of corresponding U.S. Patent No. 7,173,723 which claims priority to application No. JP 11-196773, published as JP2001-196773. References to specific paragraphs refer to the machine translation of JP2001-196773 and to column and line, to U.S. Patent No. 7,173,723.

Drawings

In response to the Examiner's objection, Figs. 2-4 of the application have been amended to include the legend "PRIOR ART".

The Present Invention

An embodiment of the present invention is directed to transmitting print data from a host apparatus having the capability of forming print data in at least two page description languages to an image forming apparatus. By a process of communication with the image forming apparatus, the host apparatus determines what page description languages are supported by the printer. The host computer then selects one of the supported page description languages and transmits the printer data over a communication channel which is dedicated to the selected page description language. Advantageously, the image forming apparatus does not have to determine the language of the print data upon receipt of the print data because the printer data is routed directly to the appropriate edit processing unit in the image forming apparatus for processing into printable information.

Rejection - 35 U.S.C. § 103

The Examiner rejected claims 1, 4-5, 9, 12-13 and 17-24 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Publication No. 2001-018492 to Hiroaki ("Hiroaki") in view of U.S. Patent No. 6,084,688 to Stumbo *et al.* ("Stumbo").

In regard to independent claims 1 and 9, the Examiner states that Hiroaki discloses a host 100 having a communication function, and an image forming apparatus having a first communication unit (I-A), a second communication unit (II-A) and a relay unit 200. The Examiner further states that Hiroaki fails to teach that the first communication unit communicates data in a first page description language and the second communication unit communicates data in a second page description language but that Stumbo discloses a first communication unit that communicates data in a first page description language and a second communication unit communicates data in a second page description language and it would be obvious to combine the teachings of Hiroaki and Stumbo. Applicants respectfully traverse the rejection.

Hiroaki is directed to a controller 200 which provides for interfacing one or more host computers 100 to multifunction printer (MFP) 500. The MFP includes a printer 300 and a scanner 400. Each host computer 100 communicates with the printer 300 via the controller 200 using data communication channels 1-A, 1-B, and communicates with the scanner via the controller 200 using communication channels II-A , II-B. (See paragraphs [0019], [0021] and col.6, lines 4-24). Data generated by the scanner 400 may be directed to the host computer 100 for editing prior to transmitting the scanner data to the printer 300 for printing or the scanner data may be directly printed by the printer 300 via the controller 200 over path III (See [0019] and Fig. 1).

Stumbo et al. is directed to a network printing system. The system includes a print server 14 which accepts print jobs from clients 10. The print jobs may be formed in one of multiple page description languages. The server includes a job manager 22 which directs the jobs to a decomposer facility 16. The decomposer facilities 16 are responsible for taking image data in a page description language (PDL) and decompose the image data to be printed on a printing apparatus. As made clear at Fig. 1 and col. 4, lines 13-43, the server is able to sort the print jobs into either a PCL print job or a PS/PDF print job and direct the print job to the appropriate decomposer. Thus, the server determines from a characteristic of the print job, the decomposer to which the print job is directed.

Amended claim 1 recites:

1. *An image forming system comprising an image forming apparatus which receives print data from a host apparatus and performs an image formation based on the print data,*

the host apparatus comprising:

a host having a communication function unit; and

a general-purpose communication unit; and

a first setup processing section that performs a setup of the communication unit, and

an image forming apparatus having comprising:

a first communication unit having a first port number;

a second communication unit having a second port number; , and

a relay unit;

a second setup processing section that performs a setup of the first communication unit and the second communication unit;

a first language processing section to process a first language; and

a second language processing section to process a second

language;

wherein the host apparatus further comprises a first transfer control unit that obtains from the image forming apparatus first plug and play (PnP) information used for processing the first language by the first communication unit and second PnP information used for processing the second language by the second communication unit, and registers port number information that are contained in the first and the second PnP information and which correspond respectively to the first and the second communication units, the first transfer control unit, after registering the port number information, specifying a transfer destination of the print data and notifying the image forming apparatus of the destination of the print data, and

wherein the image forming apparatus further includes a second transfer control unit, the second transfer control unit transferring the print data formed in the first language to the first language processing section via the first communication unit; and transferring the print data formed in the second

language to the second language processing section via the second communication unit.

Hiroaki teaches that printer data transferred from a host computer 100 to be printed by the printer 300 is always processed over the same communication path, i.e. the packet transmission reception section, 201, the data flow regulation section 206, the packet transmission reception section 201', the data reception section 301, the packet assembly disassembly section 302, the command interpretation section 303, the image expansion section 304 and the print execution section 305. As described above, information originating in the scanner section 400 may be transferred to the printer by one of two routes. However, only one of the routes includes the host apparatus 100 and even that scanner information, initially transferred to the host apparatus 100, is transferred from the host 100 to the printer 300 by the one set of communication units described above.

Hiroaki makes no distinction between the path for transferring the different types of data from a host apparatus to a printer. In contrast, amended claim 1 recites that print data is transferred from the host computer to the image forming apparatus via one of two communication units

Further the communication path taken by the scanner is determined by a user of the printer and not by obtaining PnP information from the printer, as recited in amended claim 1.

Stumbo et al. does not make up for Hiroaki's deficiency. In Stumbo et al., the communication path between the host apparatus and the decomposer facilities is determined by the host based on the page description language of the printer data. In contrast, amended claim 1 recites that the communication path is based on PnP information obtained from the image forming apparatus.

Neither Hiroaki nor Stumbo et al. teach, suggest or disclose a host unit which obtains from an image forming apparatus, plug and play information (PnP) which determines which one of a first communication unit and a second communication unit is to be used in the image forming apparatus for transferring print data from a host computer formed in a first language or a second language to a first language processing section or a second language processing section.

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Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103 rejection of claim 1.

Claims 4-5 are allowable at least based on their dependency from claim 1.

Claim 9 is allowable for the same reasons that amended claim 1 is allowable.

Claims 12-13 and 17-24 are allowable at least based on their dependency from claim 9.

Rejection - 35 U.S.C. § 103

The Examiner rejected claims 7-8 and 15-16 under 35 U.S.C. § 103(a) as being unpatentable over Hiroaki and Stumbo, and further in view of U.S. Patent No. 6,914,687 to Hosoda *et al.* (“Hosoda”).

Claims 7-8 depend from allowable claim 1 and claims 15-16 depend from allowable claim 9. Hosoda does not make up for the deficiencies of Hiroaki and Stumbo et al. Accordingly, claims 7-8 and 15-16 are allowable at least by their dependency on allowable claims 1 and 9.

New Claims 25-28

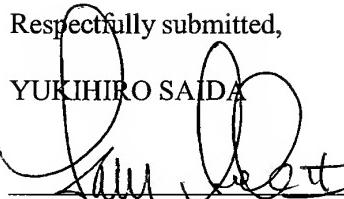
New claims 25 depend from allowable claim 1. New claim 25 depends from allowable claim 9. Accordingly, Claims 25-28 are allowable at least based on their dependency from either claim 1 or 9.

Conclusion

Insofar as the Examiner’s objections and rejections have been fully addressed, the instant application including claims 1, 4, 5, 7-9, 12-15 and 17-28 is in condition for allowance. Withdrawal of the Final Rejection, formal entry of the present “Amendment After Final,” and issuance of a Notice of Allowability of claims 1, 4, 5, 7-9, 12-15 and 17-28 is therefore earnestly solicited.

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Respectfully submitted,


YUKIHIKO SAIDA

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(Date)


LOUIS SICKLES, II
Registration No. 45,803
PANITCH SCHWARZE BELISARIO & NADEL LLP
One Commerce Square
2005 Market Street - Suite 2200
Philadelphia, PA 19103
Direct Dial: (215) 965-1294

LS/msm